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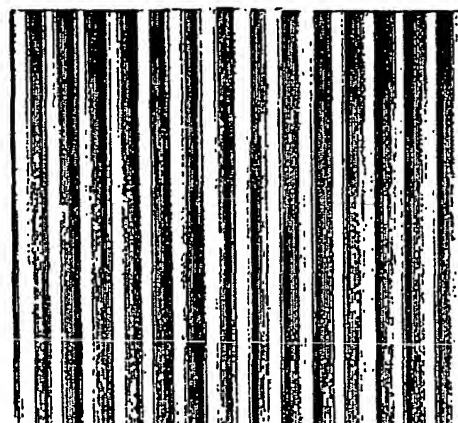
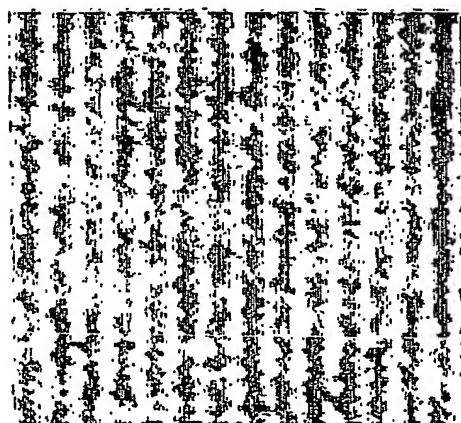
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(54) Title: HOLOGRAPHIC DIFFRACTION GRATING, PROCESS FOR ITS PREPARATION AND ELECTRO-OPTICAL DE-
VICES INCLUDING THE SAME



(57) Abstract: Composite polymer/liquid crystal material having a holographic grating structure formed by an alternating ordered succession of polymer layers and nematic liquid crystal layers. The nematic liquid crystal layers comprise an ordered nematic monophase region which is substantially free from liquid crystal droplets. Furthermore, the holographic grating structure is obtained by a process which comprises the steps of: -heating a mixture of a photoinitiator, a monomer and a nematic liquid crystal above the nematic/isotropic phase transition temperature, in order to prevent phase separation and isotropic/nematic phase transition of the liquid crystal; - illumination of the mixture with an interference pattern to induce polymerisation; - slow cooling of the mixture at a rate lower than 0,3°C/mixture, to achieve a complete orientation of the liquid crystal director, and below the isotropic/nematic transition temperature.

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